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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/083,038 | 02/26/2002 | Steven M. Ayres | 90099008 | 3133 |

7590 07/26/2004

Ephraim Starr, General Counsel
Honeywell International Inc.
Garrett Engine Boosting Systems
23326 Hawthorne Boulevard, Suite #200
Torrance, CA 90505

EXAMINER

DUONG, THO V

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3743

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,038

Applicant(s)

AYRES ET AL

Examiner

Tho v Duong

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 5,6 and 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,7-15 and 19 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

Claims 5,6 and 16-18 are withdrawn from further consideration pursuant to 37 CFR

1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election of species of figure 4 was made **without** traverse in the reply filed on 6/17/2004.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it exceeds 150 words and it contains phrase, which can be implied "In at least one embodiment, the invention is". Correction is required. See MPEP § 608.01(b).

Claim Objections

Claim 20 is objected to because of the following informalities: it appears that "a upper" is a typographical error of "an upper" at line 4. Appropriate correction is required.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4,7-15 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoffmiller (US 4,328,860). Hoffmiller discloses (figures 1 and 7) a heat exchanger comprising a laterally expandable core (3,19) having a variable size, a lower temperature port and a higher temperature port (35,38 or 11); a support structure (22,24 or 5); a mount (23,40 or 22,26,27) positioned between the core and the support structure adjacent to the second port (38 or 11), wherein the mount restrains the core such that the core varies in size away from and toward the mount; a bellows (16) attached to the core, such that the bellows (16) and the first port (35 or 11) are in fluid communication as the core varies in size; the mount comprises a pin (23) formed with the support (22,24) and a receiver (40 or 26,27) defined in the core to receive the pin; and a substantially rigid connector (18) positioned such that the bellows (16) and the higher temperature fluid port (38 or 11) are in fluid communication.

Allowable Subject Matter

Claim 20 would be allowable if rewritten or amended to overcome the objection set forth in this Office action.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

La Haye et al. (US 4,134,449) discloses a bellows sealing arrangement.

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Mangus et al. (US 3,968,834) discloses a heat exchange mounting for a turbine engine.

Graves (US 4,511,106) discloses a heat exchanger support system providing for thermal isolation and growth.

Nakamura et al. (US 6,283,199) discloses a heat exchanger.

Blomgren (US 6,119,766) discloses a plate heat exchanger with connection pipes lined with bellows.

Greene (US 5,114,588) discloses an easily replaceable rotor membrane pack.

Gorbell et al. (US 6,703,154) discloses a solid oxide fuel cell compression bellows.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703) 305-0768. The examiner can normally be reached on from 9:30-6 PM.

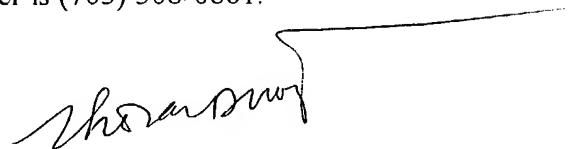
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



TD

July 20, 2004



Tho Duong

Patent Examiner.